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A REPORT OF THE DEFENSE SCIENCE BOARD TASK FORCE
ON
STRATEGIC PLANNING AND THE MARITIME BALANCE:
AN EXPERIMENT

NOVEMBER 1979

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DEFENSE SCIENCE
BOARD

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

17 November 1979

Honorable Harold Brown
Secretary of Defense
Room 3E880, The Pentagon
Washington, D.C. 20301

Dear Harold:

This is the report of the Defense Science Board Task Force on Strategic Planning in the Maritime Balance Area. Also attached is the Executive Summary of the associated Navy Study Group Report. You will recall that this was done, at the suggestion of Andy Marshall, to examine long-range strategic planning in the Services from a "business" viewpoint. A Navy Study Group spent ten months looking at long-range planning in the Maritime Area, meeting monthly with the Defense Science Board Task Force for an exchange of ideas.

As a result of the attached report and the parallel Navy work, Tom Hayward has taken action to establish a long-range strategic planning organization on his personal staff. The Task Force concludes, that: (1) The current planning system (if one exists) is too budget-oriented and shortsighted; (2) Long-range strategic planning is worthwhile; (3) It must personally involve the highest levels; (4) OSD should back the Navy and other Services in making long-range planning organizations work by creating a new OSD long-range planning organization that is responsive to you and is related to the budget process. As you know, we have the nucleus of a long-range strategic planning organization already formed at Bill Ferry's and Jim Wade's initiative. This organization needs continued strong cooperation and input from you and the USDP. It should be strengthened institutionally to provide you with a long-range decision-making tool that balances other shorter-range, budget-oriented perspectives; (5) We should provide incentives to the Services such that ideas and innovations are pursued; and (6) The Services should perceive OSD actions as the consequence of a well thought-out, long-range strategy (recognizing when our budget is insufficient to carry out that strategy); we should not reinforce the impression that we create a strategy each year to support a budget.

The Task Force also points out some areas in which the Navy needs innovation and planning; (1) How to improve ship survivability (which is addressed in a separate Defense Science Board Task Force); (2) How to effectively conduct the land-attack mission against concentrated Soviet force; (3) How to structure the Navy to deal with Third World contingencies. These are areas that need the continuing effort of a cooperative OSD/Navy long-range planning effort. If we can establish "across the table communication" between OSD and Navy in this way, perhaps we can have some degree of mutual agreement on programs and priorities before the Service budget is submitted.

The Navy Study Group Report Executive Summary provides an important insight into the way the U.S. Navy views its "product" in support of national strategy and the "market" for that "product" in OSD. The Navy perceives an inconsistency between "resources allocated and assigned objectives" that goes beyond what one would expect from a Service competing for funds. The Navy perceives shrinking U.S. Government support for its "product" while the competitor (the Soviet Navy) is marketing its wares around the world at the expense of U.S. national strategy.

These reports have been well received within the Navy, have brought about an initial Navy investment in long-range planning, and suggested important areas for early emphasis. The reports also indicate a need for OSD to aid the Navy in finding a better market for its product.

I believe that you can take steps to make the Navy investment in long-range planning pay off by constraining the budget to remain consistent with long-term goals and by listing specifically where the goals need to be modified. Of course, I am hoping that you will be able to create increasing demands on the long-range planning process that is beginning to evolve under Bill Perry's leadership and Jim Wade's work in stimulating an OSD/Service task force approach to mission area longer-range planning. PAGE is properly focused on rationalizing and improving programming; and in particular, the shorter term implications of programming. A constructive tension is needed between this short-term programming and a sound policy and resource plan based on a long-range view. Such tension can be played well within the DRB structure we now have. In order for it to bear fruit, it seems to me that you must personally give increased weight to longer-range strategic planning for the Department, and thus increase the demand for such planning.

Sincerely,

Eugene G. Fubini
Eugene G. Fubini
Chairman



DEFENSE SCIENCE
BOARD

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

4 October 1979

MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Report of DSB Task Force on Strategic Experiment in the
Maritime Balance Area

It is my pleasure to forward for your approval the final report of the Defense Science Board Task Force on the Strategic Planning Experiment in the Maritime Balance Area.

This Task Force has served a very useful purpose in allowing the Defense Science Board to work directly with a Service supported Study Group that was conducting a detailed analysis. I feel that both groups benefited from the exchange of ideas.

The Task Force also served to provide the Chief of Naval Operations with information and counsel in making important decisions on future Navy missions and force structure. The main purpose of our effort was, however, to provide insights into DoD and Navy organization through the eyes of a corporate planner. The immediate result of this has been Admiral Hayward's decision to create a long-range planning organization on his personal staff.

In order to make the Navy long-range planning organization effective, I feel that it is imperative that we emphasize long-range planning in DoD and obtain the personal support and participation of the Secretary of Defense and his principal deputies. I am aware of the long-range planning effort sponsored by the USDRE and support it; however, alone it is insufficient. Once that organization has a product, it must be used. We should act to create a lever that requires the Consolidated Guidance to follow the lead of policy and long-range planning. The Consolidated Guidance must become consolidated!

I feel that we should follow-up this report and work to make sure that the recommendations are implemented. I request your assistance in this, particularly with respect to the recommendations for DoD.

Thank you for your trust in assigning me this important task. I have had the support of some truly great people on this Task Force, and I thank them.



Henry S. Rowen
Chairman
DSB Task Force on the Strategic
Experiment in the Maritime Balance Area

Attachment

PREFACE

In August 1978, the Secretary of Defense and the Under Secretary of Defense for Research and Engineering asked the Chairman of the Defense Science Board to set up a Task Force to conduct an experiment in applying business policy/strategic planning concepts to the development of a competitive strategy for the Maritime Balance Area. The Chief of Naval Operations also set up an associated Navy Study Group to work with the Task Force.

The membership of the DSB Task Force was as follows:

Henry S. Rowen, Stanford Business School - Chairman
Robert E. Bateman, Boeing Marine Systems
Richard A. Beaumont, Management Consultant
Joseph L. Bower, Harvard Business School
Charles M. Herzfeld, ITT Corporation
Reuven Leopold, Pratt and Whitney Aircraft
Paul H. Nitze, System Planning Corporation
Frederick S. Wyle, Lawyer
Robert C. Powers, Cdr., USN, Military Assistant to DSX - Executive Secretary

The Task Force has also had assistance from Cdr. Steve F. Kime, USN, National Defense University, Fellow to the Defense Science Board.

The Task Force has operated under the general guidance of a Steering Group composed of:

Andrew W. Marshall, Director, NA, OSD - Chairman
James P. Wade, Jr., ATSD(AE)
W. N. Small, Vice Admiral, USN
James R. Roche, Cdr., USN, Office, NA, OSD - Executive Secretary

This report summarizes the findings of the Task Force in this introductory phase of the experiment. The report of the Navy Study Group which worked under the direction of Captain Robert Tolg, USN, is being published separately.



RESEARCH AND
ENGINEERING

THE UNDER SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

18 AUG 1976

(WAS established)

MEMORANDUM FOR THE CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Strategic Planning Experiment in the Maritime Balance Area

Please establish a Defense Science Board Task Force to conduct an experiment in applying business policy/strategic planning concepts to the development of a competitive strategy for the Maritime Balance area. The Task Force and its associated Navy Study Group will focus on the long-term competition between the U.S. and the Soviet Union in the maritime area, especially the naval area. The experiment will deal with the strategic planning phase of long-term planning, rather than with specific naval programs.

The work of the Task Force and the Study Group will be conducted in a number of phases, starting with the development of a broad strategy for competing. This phase should attempt to structure how we should think about and analyze the competition, including both its wartime and peacetime components. Besides providing a strategy context, the introductory phase of the experiment should:

- 1. -- Identify naval problem areas and questions which are highlighted by examining the maritime balance area from a long-term competition perspective (e.g., What is the role of the Navy in a major war, given that the Soviet advance has been stopped on the ground?);
- 2. -- Identify issues which would have maritime significance in time of major war, but which are not amenable to "naval solutions" in peacetime (e.g., establishment of overseas bases in important areas; deployment of tactical air to allied facilities for sea control; ensuring friendly behavior by countries which control particularly important straits, etc.);
- 3. -- Identify major issues relevant to the peacetime use of maritime forces; and
- 4. -- Identify criteria beyond cost and effectiveness criteria which seem particularly important in judging maritime programs.

After completion of the introductory phase of the experiment, the Task Force/Study Group will propose a select set of specific questions and/or problem areas to the Steering Group to be examined in detail from a

competitive point of view. As part of the attempt to develop a strategy for the long term, these follow-on phases should examine the chosen cases from the perspectives of operational and political planning, as well as strategic planning.

A proposed organization of the experiment is attached at Tab A. Professor Henry S. Rowen has agreed to serve as Chairman of the Task Force. Dr. James P. Wade, Jr. will be the cognizant Deputy. The Task Force and Study Group should begin their work in September 1978, and should plan on completing the introductory phase of the experiment by 1 February 1979.

Wells G. Lewis

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EXECUTIVE SUMMARY

There apparently is no American strategy for the long-run competition with the Soviet Union which warrants the label "adequate." For instance, a central component of a strategy is the definition of its objectives and it is evident that in many key areas of national security there exists no well-formulated set of objectives which has the imprimature of the highest authorities. This is clearly the case in the maritime areas of concern to this Task Force.

We make this observation while recognizing the lack of consensus on the scope and nature of American interests and on the threats to these interests. We also recognize that a system which has loose top-down direction allows potentially useful diversity to develop; it is a way to hedge against being systematically wrong. Nevertheless, it is becoming increasingly obvious that as Soviet military resources grow relative to ours, and as its capabilities are increasingly exercised, a system as unfocused in purpose as ours may not be able to carry out even the most important tasks. We are approaching the limits of incoherence in strategy that we can afford if we have not already passed them.

The Planning, Programming, Budgeting System in the Department of Defense was designed to examine goals and alternative means of achieving them and to translate choices into budget allocations. Formally, this system has many desirable properties. However, it is evident that budget considerations have come to dominate its functioning. Financial planning, a necessary component of any management system, seems to have driven out much conceptual long-range planning which should encompass political, technological and military factors. As Donald Rice says, "There is broad agreement that the first "P" in PPBS is silent." "Well-done strategy reviews ... are largely missing; long-term trends in international politics, economics, and technology and their influence on defense policies and programs are seldom treated systematically. A process for periodically challenging basic Defense policy is needed."*

The creation of the office of the Under Secretary for Policy and the Defense Planning Guidance mechanism is a response to these needs. The stated purpose of the Guidance "is to determine general policies and objectives for operational and programmatic planning in the Department of Defense. It is an attempt to translate broad national goals and objectives into

*Donald B. Rice, Defense Resource Management Study, U.S. Government Printing Office, February 1979.

policy and strategy statements sufficiently specific to guide the development of the budget oriented Consolidated Guidance." The proof of the efficacy of this instrument, as with any management tool, lies in how it is used. We have been told that the first round of the DPG has been useful in dealing with some substantive issues of consequence, especially in the maritime area.

Despite encouraging steps in the DPG, the OSD planning system as it is perceived by the Navy management is dominated by fiscal considerations. Interactions between the Navy and OSD on long-range decisions appear to be largely about platform choices (often at a level of micro-detail). By and large, the Navy seems to have accommodated to this as the most important game in the workings of the internal decision system. To be sure, different strategic views are surfaced from time to time in Navy studies, in OSD and through Navy challenges to OSD concepts--as incorporated in the Consolidated Guidance for instance. Each CNO formulates his own strategy for the Navy weighing the factors that seem to him most compelling at the time. As to the process used in the Navy, although the styles of senior executives can be expected to vary, we note that since Admiral Moorer's time as CNO, none has had an institutionalized strategic planning staff working directly for him.

The corporate strategic model is a useful analogy, but there are limits in translating them directly to the Navy problem. In particular, because the corporation chief executive has more control over his resources than does a Service chief he has a higher probability of making strategic planning effective--although in the Services, perhaps the Navy in particular, the chief executive may have a greater need for strategic planning.

The Navy has had top-level planning organizations over the years which experienced varying degrees of success; there is no such organization today reporting directly to the CNO. We reviewed Navy planning and organization and some of the substantive issues that face the Navy today regarding missions and force structure. It is the opinion of the Task Force that the Navy needs a strategic planning organization. In reaching this conclusion we are aware of the variable experience with similar units in the Navy in the past and in other organizations. This is no panacea. But there exist issues of such gravity for the Navy and the country that they should be dealt with directly by a non-parochial staff reporting to the CNO and VCNO.

The Task Force worked closely with the Navy Study Group on the Strategic Planning Experiment in the Maritime Balance Area.

This Study Group analyzed in some detail what we reviewed more generally. The methodology that they used paralleled corporate methods and is considered to be also useful. Their efforts are summarized in Section V.

It is a conclusion of this Task Force that the Navy cannot effectively carry out such strategic planning unless OSD also does. And, at each level, such planning will not work unless the chief executive participates and provides support.

In short, the principal recommendation of this Task Force is that the OSD and Navy engage in strategic planning efforts along the lines described in the body of this report. Such an activity should help inform, affect, and interact with the budget and program oriented activities that are now so prominent in the Department.

Finally, the CNO has, as of the writing of this report, and in part resulting from the work of the Task Force, initiated action to set up a long-range planning organization on his personal staff.

CONCLUSIONS AND RECOMMENDATIONS

Relationship to Corporate Planning

1. Strategic planning is even more important in OSD and the Navy than in the corporate firm, yet it is not done as much.
2. The issue is not the existence of unique corporate techniques, but rather the importance of OSD and Navy doing strategic planning using known techniques.
3. Integrated, top-down processes that involve executives at all levels of the corporation are the most successful in the private sector and are applicable to OSD and Navy.
4. Effective strategic analysis requires a freedom from constraints imposed by strongly established personal or organizational positions.
5. Strategic planning should involve and support line organization managers as much as possible consistent with the need to innovate and introduce change when needed.
6. The OSD "requirements" process gives much less weight to the search and trade-off emphasis of the corporate model.
7. The corporation chief executive officer has more authority than a Service chief in DoD whose decisions on resource allocations are subject to micro-review and veto by numerous players.
8. The OSD budget review process tends to look upon ideas or innovation as "soft" or "matters of opinion" and directs attention toward more tangible hardware items, thus underrating conceptual advances and doctrinal development.

Management Interaction with High Authority

1. Budget considerations, rather than strategy, have come to dominate the functions of the OSD PPBS system.
2. The mechanisms for systematically challenging defense concepts are inadequate; this shows up clearly in the maritime area.
3. There is no institutional conceptual analysis at a high level in DoD. The Defense Planning Guidance of 1979 was a step in the right direction, but needs further development.

4. The Navy is caught between the unwillingness to admit lack of capabilities to perform a given mission and the need for improved capabilities.
5. The Navy is increasingly having to cope with a growing across-the-board Soviet threat with resources that are visibly inadequate. However, to some Task Force members, we face fundamental national choices concerning our world position. On this view, improved Navy strategic planning will not make much difference.

Illustrative Problems Requiring Strategic Analysis

1. Ship Vulnerability

- A. Growing Soviet ocean surveillance, targeting and cruise missile capability are rapidly increasing the vulnerability of surface ships.
- B. The ship vulnerability problem is particularly serious when tactical nuclear weapons are employed.
- C. Technology offers new possibilities, but they have not yet been melded into an adequate strategy.
 - Increase active defense
 - Make ships physically less vulnerable
 - Increase EW, cover and deception
 - Disperse offensive power to complement carrier Battle Groups
 - Cruise missiles on surface ships and submarines.
 - V/STOL for cruise missile targeting or in fighter-attack roles on smaller, more numerous ships

2. The Land-Attack Problem

- A. Penetrating aircraft are becoming more vulnerable, and more costly to build.
- B. Possible solutions:
 - Give up offensive mission (high cost from an over-all strategy viewpoint)

- More effort on
 - Penetration aids
 - Stand-off weapons
 - More emphasis on short-range precision guided munitions.
 - Substitute long-range cruise missiles for some aircraft.
 - Exploit strong synergism between manned and unmanned vehicles and use cruise missiles to complement the capability of strike aircraft.
3. Proposals that the Navy Concentrate Largely on SLOC Protection to Central Europe
- A. This DoD sponsored strategy illustrates the need for deeper thought on basic political-military issues.
 - B. Navy needs to make clear the inadequacy of this strategy based on an appreciation of the full set of important contingencies that can occur.
4. Soviet Military Interventions in Third Areas
- A. Soviet interventions are growing in number, magnitude and importance to U.S. interests.
 - B. In the past, Third Area intervention has been considered a subset of naval wartime capability. This strategy should be reviewed in the context of:
 - Forces deployable to Third Areas of Soviets simultaneously make threatening moves in Europe or Northeast Asia.
 - Blocking or exploiting the vulnerabilities of Soviet forces or those of its allies in these areas.
 - Devising actions that would be militarily effective and limit escalation risks.

Management Within the Navy

1. Navy has accommodated excessively to the fiscally dominated OSD planning system. It has a system in which long-range decisions are made largely about platform choices rather than concepts for the use of naval forces.
2. Institutionalized conceptual analysis at a high level has eroded and virtually disappeared within the Navy over the past 15 years. There is a need for both top leadership involvement in strategic planning and an institutionalized process.
3. Some issues are of such central importance to the Navy and may run sufficiently counter to existing interests that they need to be addressed by a staff responsible to the CNO. A strategic planning staff should be established for this purpose.

I. THE CORPORATE STRATEGIC MODEL

The corporate strategic model shows how analogous tasks are carried out in the setting of the market firm - or at least how it is done in some of the most successful firms. There are, of course, important differences between the public and private sectors but these differences suggest that top-down strategic planning is more important in the DoD than in the firm.

We have concluded that the basic question at issue is not the existence of particular techniques that might usefully be transferred from the private sector to the maritime sector. It is rather the importance of doing careful strategic planning using known techniques.

A corporate strategy is the pattern of decisions which in the aggregate:

1. Determines the basic objectives of the corporation.
2. Defines the principal strategies and tactics for achieving these objectives.
3. Shapes a distinctive organization for employing particular means to the ends sought.

For an organization to survive in a competitive environment it needs to create and maintain an advantage in one or more important segments of business activity: e.g., marketing, product performance, production efficiency, cost of inputs, and financing. Since competitive forces tend to erode such advantages they continually need reinforcement, or new ones developed, through such activities as R&D, market forecasting, opening up new markets, prudent acquisition of raw materials and the like. The resultant pattern of choices defines the distinctive character of the firm and the special niche that it occupies in the market.

The resulting pattern can be described in a statement which identifies the salient, unique features of the firm and how it seeks to preserve or reinforce that uniqueness which is essential to continued success. For example, a capsule statement of strategy which captures some important features of the International Business Machines Corporation strategy would include its basic decision to provide data processing for customers instead of merely providing hardware (which was the strategy

of such competitors in the typewriter market as Remington Rand) and its orientation of research, manufacturing, marketing and distribution accordingly. IBM's central technical choice in computers was the large, efficient main-frame computer. A competitor, Digital Equipment, built its strategy around distributed, small computers and effective peripheral equipment. Another large competitor General Electric, failed to develop a strategy that gave it a competitive niche and left the party.

A statement of corporate strategy has the important merit of explicitness. It communicates a sense of purpose to guide sub-unit behavior. Moreover, when made explicit it may expose important weaknesses in the strategy which can then be worked on.

An important lesson from the experience of formulating business strategies is that integrated, top-down processes that involve executives at all levels of the corporation seem to be among the most successful. In contrast, those that concentrate narrowly on some aspects of the business, e.g., financial management or budgeting, while neglecting others are not likely to do well. This is not to say that every aspect of a corporation's activities is equally important; but management may misjudge some important parameters of the business unless it is able to take a comprehensive view.

A brief review of one formulation of the process of corporate strategic planning, highlights some of the similarities between business and military strategy formulation. Consider the following nine-step process (which is proposed as a continuing, feedback one):*

1. Formulate concepts and broad goals
2. Analyze the environment
3. Establish quantitative targets
4. Formulate micro-strategy at sub-unit levels
5. Aggregate upward and analyze gaps
6. Search for new strategy to fill gaps
7. Select the portfolio of strategic alternatives
8. Implement the strategic program chosen
9. Measurement, feedback and control

*"Strategy: Formulation, Implementation and Monitoring,"
Kalman J. Cohen and Richard M. Cyert. *The Journal of Business*,
Vol. 46, No. 3, July 1973.

This sequence suggests a more "linear" character than successful strategic planning has in practice. In actuality, a well-functioning planning process moves up and down across these stages and cuts across levels of the organization. In this process, which can often look disorderly, changes occur and new options are perceived.

Examination of the corporate strategic planning experience reveals a large spread in effectiveness among firms. What accounts for these differences? The reasons are complex, but it appears that effective strategic analysis requires a freedom from constraints imposed by strongly established personal or organization positions; a diversity of inputs and ideas in concept formulation; the development of a high degree of consensus within the organization for implementation to succeed; close attention to the timing of moves; and the design of the activity to serve line managers who, in the more successful cases, spend a lot of time on this activity.

This process has elements which will be familiar to those acquainted with the PPBS system and to the much longer established practice of military planning. Yet there are significant differences in emphasis. For example, there is probably more corporate emphasis on the relationship between top strategy and the sub-unit level, a more systematic search for new strategies and changes in the strategy portfolio than occurs in the defense sector. By comparison the military "requirements" process, although sometimes less rigid than it appears formally, gives less weight to the search and trade-off emphasis of the corporate model. And, on implementation, the DoD is dependent on actions by many players including those in the legislature.

The most obvious difference is that, despite the complexities of corporate objectives, there is a comparatively simple, underlying objective function--the "bottom line" of profit. The DoD and its components such as the Navy have no such straightforward objective function. A second important difference is ignorance about what is being bought. Many people --including many members of Congress--are not really clear on what it is that they are getting when they buy defense. Certainly they are less informed than they are on consumer products and many publicly produced services. The highly technical nature of defense activities, the complex character of its objectives and operations, the fact that the services produced are collective ones, and the long-term horizons involved make this a sector where knowledge is dominated by specialists most of whom necessarily are the producers of the services. The voters are sovereign but they are not necessarily well informed.

Another major difference is the disparity between responsibility and authority of the senior management. The corporate CEO has both the responsibility to guide his company's strategy and resource allocations and usually a lot of authority to make those allocations. The CNO has high responsibilities but his decisions on resource allocations are subject to micro-review and veto by numerous players, e.g., OSD, OMB and Congress among others. And the tenure of senior managers tends to be shorter in government than in industry--except for senior members of Congressional committees. (The contrast with Admiral Gorshkov's long period as head of the Soviet navy is striking.)

To be sure, although there is no equivalent test to the market for the Navy's performance, analogies can be identified. For instance, perceptions of strength can influence the behavior of governments short of the test of war. And occasionally that test does come. But, most feedback is indirect, muffled, and comes with a long lag. Usually, the most important operational test is the willingness of the Executive Branch and the Congress to make annual budget appropriations. The operation of ships, submarines, and aircraft and replenishment activities also provides war-related data which provides a partial basis for evaluating effectiveness. But many activities, and the performance of the system as a whole, cannot be tested short of crises and combat; cost-effectiveness analyses are essential but they cannot substitute for experience. Without such real feedback the incentive to focus on carrying out certain specific, bottom-line-type tasks is weak. It is entirely to be expected in such a situation that factors internal to organizations have an especially powerful influence on behavior and may dominate those of the external environment. Therein lies a source of potential surprises--and disasters.

We also observe another difference: the conduct of military operations is no longer dominated by individual Services but by joint activities among them under a command chain which runs through the JCS and the regional joint commanders. But they are not centrally involved in the strategic planning process that shapes the forces of the future. It is as if in a firm those responsible for investment decisions were significantly decoupled from those responsible for sales and production management.

These differences make strategic planning both more difficult and more important in defense than in the firm.

II. THE POWER OF IDEAS

There is a familiar quotation from J.M. Keynes on the power of ideas over the activities of men of action. Ideas are extraordinarily powerful but the attitude to them in the defense system is curiously uneven. In the R&D arena we hold ideas in great respect. They can lead directly to better hardware, to operationally demonstrable advantages. But at the level of strategy, the uses of forces in various contingencies, or the impact of the perception of such utility, there is a tendency to regard such considerations as "soft" or matters of opinion and to focus on budgets and hardware; these are tangible.

A bias against conscious fostering of ideas, concepts, doctrine --often true both in firms and in government agencies--can result in great loss. But clearly wild flights of fancy will not do. Fruitful concepts are rooted in deep understanding of the underlying operational, technical, economic, or political factors and are developed through an interplay among them. From such interactions--together with the application of imagination --sometimes a few powerful concepts emerge which can have enormous practical consequences. This happened in the history of aviation, including naval aviation, and in rocketry (e.g., the concept of ballistic missile carrying submarines). The development of the blitzkreig concept by Guderian, building on the work of others, provides another example.

The history of Western civilization contains a large number of examples where superiority in an engagement, or in a war, came about not because of numerical superiority but because of more intelligent exploitation of the resources available. However, the process now used in OSD does not make it easy to take such factors as spirit, initiative, leadership, strategic planning into account. These decisions tend to be made on the basis of number of platforms and of weapons with most attention devoted to the individual capability of each weapon or platform.

We submit that a well conceived strategic planning process will serve to unify purposes, align concepts, and increase the probability of a common spirit and a common purpose developing among the various forces.

III. NAVY LONG-RANGE PLANNING

For the first half of this century, the responsibility for long-range planning was lodged in the General Board of the Navy. It was created in 1900 for the purpose of advising the Secretary of the Navy on what was necessary to "insure the efficient preparation of the fleet in case of war and for the naval defense of the coast." Although advisory in nature, it played a major role in plans and policy for much of its existence. For its first twenty years, its members included the Director of Naval Intelligence (and from 1915 to 1920 the CNO--a post created in 1915--and the Commandant of the Marine Corps). After 1920, the appointed members of the Board were five or more senior line officers most of whom were distinguished flag officers on their final tour of active duty. With the creation of the JCS in 1942 and the National Military Establishment in 1947 the Board went into a decline and was abolished in 1951.

In 1952 a Strategic Studies Branch (designated OP-94) was established and in 1955 a Long-Range Objectives Group (designated OP-93). Aside from its work on independent Navy views of the future of technology and strategy it participated in the preparation of joint plans including the JCS five-year Joint Strategic Objectives Plan (JSOP) a document which as time passed became not much more than a compilation of the Service "wish lists" of forces and equipment. Between 1955 and 1963 all of the directors of OP-93 were men who later achieved four-star rank (Griffin, Johnson, Rivero and Moorer). Through 1963, OP-93 reported only to the CNO and VCNO. OP-93 during this period appears to have been intimately involved with many of the Navy's key innovations in forces and doctrine.

In 1963, the Long-Range Objective Group (OP-93) was moved over--and down--within the newly established office of Program Planning (OP-090) which was created in response to Secretary of Defense McNamara's PPR System. OP-94 continued to produce analyses on future weapons and forces in the mid-1960s; the Deputy CNO for Plans, Policy and Operations (OP-06) also began during this period to produce the Navy Strategic Study. In 1970, the Long-Range Objectives Group was abolished by Admiral Zumwalt. Its remaining functions were reduced and layered down to the situation today where it is under the Director of Systems Analysis (OP-96), directed by a Commander (OP-965).

At present, the surface (OP-03), air (OP-05) and submarine (OP-02) platform sponsors produce plans covering their scope of responsibilities, OP-965 prepares for CNO his Planning and Programming Guidance, prepares the Extended Planning Annex to the POM, and sponsors conceptual planning studies. OP-06 is largely occupied with the JCS arena and OP-96 with the PPB System.

In sum, the past fifteen years has seen the erosion of institutionalized conceptual analysis at a high level in the Navy. (The same might also be said of OSD in the 1970s with the difference that the practice of doing such conceptual analysis was never thoroughly established there in the first place.) There have, of course, been many special, more-or-less ad hoc, studies including the Sea Mix series, Admiral Zumwalt's Project 60 and Project 2000 and the recent SeaPlan 2000 study among others. Long-range planning staffs can become irrelevant to the perceived needs of top managers and that doubtless was Admiral Zumwalt's view when he abolished the Long-Range Objectives Group. Such organizations, if too remote in their activities from fiscal realities can be seen as irrelevant to the main needs of the organization and this may have happened in this case. Moreover, although conceptual analysis and cost-effectiveness studies of the kind that are now done are important components of the corporate strategic planning model described above, much more is required for effective overall strategy formulation. The absence of a strategic planning staff leaves quite a burden of conceptual thinking and strategy formulation to be done by the CNO and his handful of top managers. Needless to say, they have a full agenda of other matters to attend to.

IV. DANGERS AND OPPORTUNITIES

Although we were principally concerned with questions of process, they are inescapably linked to those of substance. The dangers flowing from growing Soviet naval strength and its increased propensity to exert military leverage beyond its borders creates several problems for the Navy which have been identified but not adequately resolved. Four of them illustrate topics that badly need increased strategic planning efforts. Our purpose in raising them is mainly to point to their importance as items on the strategic planning agenda which need attention.

A. The Ship Vulnerability Problem

Growing Soviet sea surveillance and targeting capabilities together with air and submarine carried cruise missiles pose an increasingly serious threat to surface ships. This is most obviously true if nuclear weapons are used but the threat from coordinated large scale use of missile-delivered non-nuclear warheads is becoming increasingly dangerous.

Technology offers new possibilities, but they have not yet been melded into an adequate strategy. If one is to depend on more powerful active defense; such defenses are a necessary component of an overall strategy--but active defense as the main element of such a strategy would be very costly, cannot provide the necessary leakproof defense against nuclear attack, and is uncertain against increasingly sophisticated non-nuclear attack. Another is to make ships physically less vulnerable, a move whose cost-effectiveness is not yet demonstrated. Electronic warfare and other means of cover and deception may have a very high payoff but viewed in the perspective of the long-term competition with the Soviet Union its effectiveness in the more distant future is necessarily uncertain. Another proposal that received much attention during Admiral Zumwalt's tenure as CNO is the high-low mix concept. One part of this concept was the dispersal of V/STOL aircraft to ships smaller than large carriers--although not necessarily "small" ships. Although a strong case has been made for the high-low mix concept, and may be applicable for attack aircraft over the long term as V/STOL technology improves, it is no solution to a threat which is growing rapidly. Indeed, the threat is likely to keep ahead of the possibilities provided by such a shift. Putting long-range cruise missiles on more platforms (surface and sub-surface) has important merits especially for nuclear

delivery (because it could provide widely dispersed nuclear offensive capability probably at moderate cost) and it may also offer important advantages for non-nuclear contingencies especially used in close coordination with manned aircraft.
However, the proper role of cruise missiles in the Navy from the perspective of lowering vulnerability and other objectives has yet to be worked out.

In short, there is no shortage of technical options; stimulating additional ones and combining them into a viable strategy is a formidable task which remains to be done.

B. The Land Attack Problem

The technologies of surveillance and precision delivery of weapons that are making ships more vulnerable are also threatening penetrating aircraft. This problem is becoming all the more acute as aircraft have grown in cost and, as a result, shrunk in numbers. This trend puts in question the ability of aircraft to penetrate sophisticated air defense environments, especially in non-nuclear contingencies which usually require repeated visits to targets. This prospect is especially troublesome for a Navy strategy which--for good reasons--would rely heavily on offensive operations against Soviet bases. (This problem is not unique to the Navy; the Air Force faces a similar challenge.)

Amphibious operations against an opponent equipped with sophisticated surveillance and short-range attack capabilities also face similar problems.

For air attack on well defended land targets, one view that has been put forward is to give up on the mission, or give up on it against high defense environments. This is a basic strategic alternative and one that is likely to involve high costs to our security position. Another is to put even more effort into penetration aids and stand-off air-delivered weapons. This may work but the cost in "virtual" attrition--i.e., resources diverted to keeping down losses of aircraft would be high. Still another is substituting (long-range) cruise missiles for aircraft. This alternative, probably effective for nuclear delivery, is likely to be very costly--especially in non-nuclear contingencies except for selective attack on certain high-value targets. More promising is the possibility of exploiting the strong synergism between manned and unmanned vehicles so as to utilize the comparative advantages of each.

Again, a complex problem with a number of technical and operational options which requires creativity and a comprehensive approach.

C. Proposals that the Navy Concentrate Largely on SLOC Protection to Central Europe

This proposal, which emerged from PAGE last year, illustrates the need for deeper thought on basic political-military issues in OSD. It was based on the centrality of our interests in the defense of Central Europe together with the belief that growing Soviet offensive strength makes other missions less feasible. However, it implies weakened support to the NATO flanks and lowered capability to respond to contingencies in third areas including the Persian Gulf and the Western Pacific. To say the least, this strategy (and a conceptually related one, that of the Swing Strategy which would have much of the Pacific Fleet move to the Atlantic in the event of a major NATO contingency) has been based on inadequate appreciation of the dangerous contingencies that can occur around the world, the connection between contingencies elsewhere--for example, in the Middle East--and the security of Europe, and the consequences of a strategy which would leave some allies much more exposed to coercion and attack.

Part of the motivation for this proposal very likely was the belief that available future resources won't stretch to cover all of today's missions. This may be true but a much deeper analysis is needed before deciding on which ones, if any, to eliminate. The Navy can do much deeper analysis and by doing so displace less adequate analysis by others.

D. Contingencies in Third Areas

Chaos and conflict in third areas is growing in magnitude; these developments are increasingly encroaching upon important American interests such as the continued flow of oil from the Middle East. Moreover, Soviet backed operations by Allies, e.g., Cubans, or direct Soviet moves--for instance in the Persian Gulf--could threaten important enough interests to require us to respond militarily. In so doing we might have to confront Soviet naval power directly. Such possibilities pose serious questions not only for naval strategy but clearly also for national security policy writ large. They put very much in question our narrow focus on Europe. For example, what forces could we send in response to a crisis there if the Soviets simultaneously made threatening moves in Northeast

Asia and the Indian Ocean? How might we act effectively to block or to exploit the vulnerabilities of Soviet supported forces or Soviet forces themselves? And in the latter case what kinds of action might be really effective while limiting the dangers of escalation?

Current proposals are being examined for improving our capacity to operate in the Indian Ocean, Persian Gulf region. They involve issues of deployment, bases, prestocking, role of Allies, possible rules of engagement and more. The phenomenon of Soviet pressure on third areas is continuing; it requires a basic review of strategy generally and, in particular, a review of the basic role, structure, strategy, and budget of the Navy.

V. THE NAVY STUDY GROUP EXPERIMENT

The Navy Study Group, which has operated under the general supervision of the DSB Task Force, has sought to structure the nation's objectives in the Maritime arena (not just the Navy's activities) into several broad mission areas and sub-areas (labeled by them "businesses" and "services") and has looked in some depth into one sub-area, Sustaining Commerce in the North Atlantic.

It has suggested structuring the Maritime arena into four broad categories:

1. Win Maritime Superiority in Wartime
2. Conduct Maritime Commerce in Wartime
3. Conduct Maritime Military Operations and Main Combat Readiness in Peacetime
4. Conduct Maritime Commerce in Peacetime

Each, in turn has been further divided into subordinate missions: e.g., under the first category of Win Wartime Maritime Superiority:

1. Destroy the Energy Fleet
2. Contain Geographically

and so forth, including missions identified by geographical subdivision. Each objective was examined and for each the current strategy and trends examined, the alternatives currently proposed reviewed, the relevant U.S. and Soviet strengths and weaknesses described, and other potentially promising alternatives identified.

As one should expect, the precise definition of each of these missions can make a large difference. For example, for that of Sustaining Commerce in the North Atlantic, a splendid job might be done in protecting that SLOC but if the receiving ports are destroyed the value of this protection would be much reduced. Another possible effective component of strategy that falls outside of the mission of SLOC protection narrowly defined is to seek to destroy enemy forces at their bases. Prepositioning, now being pursued in Central Europe,

also fits into an overall strategy for wartime logistic support; it may be even more important in those regions where the SLOCs are more vulnerable such as the links to the Northern Flank and to the Eastern Mediterranean than in Central Europe. Unconventional sea-based alternatives include reducing merchant ship vulnerability through the use of torpedo decoys, employment of bolt-on SAM defenses, using merchant ships as platforms for towed arrays and helicopters, and employment of cover and deception tactics. Several of the more promising concepts use the "natural energy" inherent in the large number of merchant vessels available.*

In sum, a mission, such as maintaining the flow of material to Europe in a conflict, can be viewed as the DoD analogue of a business product or service. It is susceptible to many of the types of exploration of product line strategy, programs of cost reduction, new product development, new markets to be entered and old ones to be abandoned, major research and development expenditures, major advertising campaigns, and major physical investments that are characteristic of corporate strategy. There are even possibly useful analogies to the choice between internal growth and growth outside the organization; e.g., in the defense world, engaging the support of allies is analogous to undertaking a joint venture.

In the corporate world, strategic planning frequently means exploring the definition of products and markets in several different ways with explicit trade-offs being made at all levels. These activities go on in the defense sector, often to good effect. But the bureaucratic-political incentives to engage in such process--which can be painful--are often weak, especially where powerful organizational interests are threatened. There is need for a much more conscious pursuing of these activities.

In particular, the following conclusions of the Navy Study Group effort should be considered.

*The recent report of the Atlantic Council's Working Group on Securing the Seas examined several of these and other maritime initiatives that might be taken. See "Securing the Seas: Soviet Naval Challenge and Western Alliance Options," The Atlantic Council, October 1978.

Strategy and Planning

1. The current Navy organizational structure does not facilitate long-range strategic planning. We need to reinstitute a capability in the Navy staff to perform high-level, long-range planning.

2. There are "disconnects" between resources and requirements at the national level and between policy and organizational output at the Navy "corporate" level.

- Goal of maritime superiority over an expanding competition is application of finite resources to essentially unlimited objectives.

- Navy efforts of innovation adoption to improve our competitive posture remain largely underfunded and without champions.

- We overload the front end of the R&D pipeline, thereby underfunding and stretching out the path from innovative idea to new hardware, at a time when our adversaries are developing new systems at a rapid rate.

- Within the organization, there seems to be no clear consensus about what the Navy strategy and missions are.

3. No change to business priorities has taken place, despite changing economic, political and military conditions in the world.

4. The Navy's potential to perform as an instrument of foreign policy stimulated demand and requirements which it cannot predict, and over which it has no control.

5. The current path of stretching resources and "can do" may threaten the Navy's fundamental distinct competence; being able to do its job in the face of improving competition.

6. Given an operational definition of maritime superiority such as developed in this study effort, the questions become: Where must we have superiority? How do we get to a state of superiority? What do we plan to do with it?

7. The CPAM/POM process has become an end in itself, with less focus on the nature of the competition external to the organization. It is not long-range strategic planning.

8. In our internal management of the research and development process, which is critical to our organizational capability to develop and adopt innovation, means have become confused with ends.

9. There is no stronger evidence of the grip of the budget process on the planning function than the recent efforts of OSD(PA&E) to totally invert means and ends in the maritime area, whereby the budget becomes the strategy. (Referring to the SLOC defense-only "strategy.")

10. We need to obtain an understanding within the Defense establishment that cost savings from reduced deployments (or other savings) will not be taken away, but can be reapplied to improving competitive capabilities in other high priority areas dictated by the long-range strategic planning process.

11. The enhanced long-range planning function could be fostered in shops such as OP-965, or even OP-00K, where there is a precedent for access to top management.

12. The key output of an iterative strategic analysis process would be initiatives that could be taken in the near term toward the achievement of our strategic goals in the near and distant future and which could be injected into the force planning process by their inclusion as the meat of the CPPG document, which guides the CPAM process.

Navy Problems Requiring Strategic Analysis and Planning

1. We must address and begin to solve our naval vulnerability problems in nuclear and chemical warfare, which the Soviets are prepared to wage against us.

2. We must examine the relevance of our opposed amphibious assault capability in the light of potential opposition with tactical-nuclear, chemical and precision-guided weapons.

3. We need to address the issue of allowing impunity to the Soviets a sanctuary for their naval forces and SNA in homeland bases.

4. We need to clarify the legal basis for the "historical" naval duties as an instrument of foreign policy, with the object of generating support for forces sufficient in capability and kind to perform these duties.

5. We need to assess in a hard-headed manner the extent of support we can realistically expect from our allies under

various worldwide scenarios and then more clearly define which wartime tasks are to be ours, and which are to be the allies.

6. Accelerate the use of our technology to exploit identifiable vulnerabilities in Soviet geographical isolation, C³ and ocean surveillance systems.

7. Improve surface ship resistance to "cheap kill."

8. Improve our capability to operate in an electronic jamming environment.

9. Improve the self-defense capabilities of our merchant fleet.

10. Engage in Battle Group replacement concept definition.

11. Get advanced hull design prototypes out of "analysis' paralysis." Build some and begin testing them.

12. Fit cruise missiles on as many ships and aircraft as possible to distribute and increase offensive power.

VI. SUMMARY

Stress on the Navy

The Navy is pre-eminently a "can do" Service. As resources shrink relative to demands, the Navy accepts all assignments and the operators continue to do their best. This "can do" attitude also stems from the Navy's view of essential national strategy as a forward deployed, globalist strategy that requires a strong Navy. This has been the national strategy, and the Navy believes that it cannot afford to allow the attitudes of one administration of four to eight years dismantle the core of the strategy: the U.S. Navy, which takes 10 to 20 years to build (or rebuild). Members of the Navy see the organization--and it is seen from outside--as an enormously flexible and unique instrument of national policy. Flexibility is a core characteristic of naval forces: mobility among regions, responsiveness to changing events, relatively low dependence on overseas bases, low political visibility if wanted, adaptability of platforms to new weapons. But these valued characteristics do not come free. They necessarily cause diffusion of effort over many tasks, an acceptable situation if there is enough organizational "slack" in the system. That is no longer true. From here on, the stress on people, equipment and readiness is likely to lower the Navy's ability to carry out its multiplicity of tasks.

Such a situation, if it gets bad enough means that some objectives will have to be given up. New objectives should be defined consciously and explicitly and not be determined inadvertently. Decisions involving new objectives cannot be made by the Navy alone because of the implications for the U.S. role in the world, although it would obviously be an actor in the retrenchment process. Another task for strategic planning, interacting with SecNav, OSD and the NSC.

The View That Only More Resources and Will Can Help Significantly

In contrast to the view that corporate planning concepts have promise for maritime planning, some members of the Task Force believe that our over-riding problem is trying to cope with a growing, across-the-board Soviet threat with wholly inadequate resources, a problem that is made more acute by outsiders' growing perception of an American unwillingness for action. On this view, marginal trade-offs among missions and among technologies will not make much difference. The choices we face are

fundamental. Without significantly increased resources we may simply be unable to contest Soviet military preponderence over the Eurasian landmass, the Middle East and Africa as well as Soviet nuclear superiority. A perceived lack of vigor in our behavior may cause others to change their alignments thereby further weakening our ability to compete. In consequence, we may have to concentrate on the defense of the United States, the Western Hemisphere and, possibly, some forward island positions such as Japan and the UK.

This view is consistent with the need for strategic planning, but the choices seen are stark ones. It is also evident that those who hold this view see these as pre-eminently national strategy choices--but ones for which a range of Navy potentials could have an important impact.

Finally, whatever the level of resources the President and Congress in their wisdom make available and whatever the implications for national or maritime strategy, deeper thought is needed on what we should be trying to do and how to do it. Without according too much influence to the power of good ideas to move the holder of purse strings, there is sometimes a connection between the objective merit of proposals put forward and the willingness of President and Congress to invest in them. In short, good strategic concepts, widely advertised, may help in marketing the case for more money.

Organizational Options

The Task Force explored a number of possible changes in organizational structure and procedures including changing the structure of OPNAV to give more emphasis to output-oriented missions and less to platform categories involving the regional commanders more in the strategic-planning process, and building a strategic-planning activity along the lines described above. Without denying the potential merit in these other possibilities, it appears evident that at least a strategic-planning activity, reporting to the CNO and VCNO, could be of great potential value. Much depends on how it is done and the qualities of the people selected. Without proposing a specific organizational arrangement, the Task Force observes that it is important that this activity not be excessively dominated by program and budget considerations which inevitably have a near-term and narrowly constrained focus. It is also important that those appointed to this staff be supported by the CNO regarding their career prospects. The problem of staffing such an activity is challenging. There is a need for a team that has the confidence

of the top leadership, imagination, a thorough knowledge of the organization, expertise in the various branches of the Navy, in technology, in political-military affairs, in budgetary problems, in intelligence and in combat operations among others. This list may seem equivalent to finding people who can also walk on water but we are confident that the impressive array of human resources within the Navy includes people who can be brought together in a team that can meet these qualifications.

APPENDIX

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